1645

PATENT
Customer No. 22,852
Attorney Docket No. 04995.0044-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE P#6

In re Application of:	
Anthony MAURELLI et al.	Group Art Unit: 1645
Application No.: 10/034,213	Examiner: Jennifer Graser
Filed: January 3, 2002	
For: METHODS OF IDENTIFYING BACTERIAL GENES THAT ARE INCOMPATIBLE WITH BACTERIAL PATHOGENICITY, AND THE USE OF SUCH GENES, SUCH AS *CADA*, TO REDUCE PATHOGENICITY IN A BACTERIA OR TO COMBAT PATHOGENIC BACTERIAL INFECTIONS	

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97(c)

Pursuant to 37 C.F.R. §§ 1.56 and 1.97(c), Applicants bring to the attention of the Office the documents listed on the attached PTO 1449. This Information Disclosure Statement is being filed after the events recited in Section 1.97(b) but, to the undersigned's knowledge, before the mailing date of either a Final action, Quayle action, or a Notice of Allowance. Under the provisions of 37 C.F.R. § 1.97(c), this Information Disclosure Statement is accompanied by a fee of $180.00 as specified by Section 1.17(p).

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

Copies of the listed documents by Sanz et al., Ordoñez et al., and Gabastou et al. are attached. Copies of the remaining documents were previously submitted to the Office or cited during the prosecution of the prior Application No. 09/281,274, filed March 30, 1999, upon which Applicants rely for the benefits provided in 35 U.S.C. § 120.

Applicants respectfully request that the Examiner consider the listed documents and indicate that they were considered by making appropriate notations on the attached form.

In lieu of a translation or statement of relevance, the relevance of the Gabastou et al. article may be found in the English-language Summary that accompanies the article and in Applicants' remarks in the accompanying Amendment.

An English-language translation of French Patent No. FR 3,795 was submitted to the Office previously during prosecution of parent Application No. 09/281,274, filed March 30, 1999.

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art." If the Office applies any of the documents as prior art against any claims in the application and Applicants determine that the cited documents do not constitute "prior art" under United States law, Applicants reserve the right to present to the Office the relevant facts and law regarding the appropriate status of such documents.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

Applicants further reserve the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

This Information Disclosure Statement is accompanied by a fee of $180.00 as specified by Section 1.17(p). If there is any fee due in connection with the filing of this Statement that is not enclosed herewith, please charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P.

Dated: May 13, 2003

By: _____
Elizabeth A. Doherty
Reg. No. 50,894

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

OMB No. 0651-0011

INFORMATION DISCLOSURE CITATION

tty. Docket No.	04995.0044-01	Appln. No.	10/034,213
olicant	A. MAURELLI et al.		
F ng Date	January 3, 2002	Group:	1645

U.S. PATENT DOCUMENTS

Examiner Initial*		Document Number	Issue Date	Name	Class	Sub Class	Filing Date If Appropriate
	1	5,502,055	03/26/96	Wang			

FOREIGN PATENT DOCUMENTS

		Document Number	Publication Date	Country	Class	Sub Class	Translation Yes or No
✓	2	FR 3,795	12/27/65	France			No
	3	WO 85/03521	08/15/85	PCT			
✓	4	0 279 273 A2	08/24/88	PCT			(Abstract)
	5	WO 95/15396	06/08/95	EPO			

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

✓ 6	J.M. Gabastou et al., "Amines Digestives D'Origine Bacterienne et Troubles Comportementaux, A Propos d'une Observation," *Path. Biol.* 44(4): 275-281 (1996).
✓ 7	A.I. Ordoñez et al., "Formation of Biogenic Amines in Idiazabal Ewe's-Milk Cheese: Effect of Ripening, Pasteurization, and Starter," *J. Food. Protection* 60(11): 1371-5 (1997).
✓ 8	Y. Sanz & F. Toldrá, "Polyamines Affect Activity of Aminopeptidases from Lactobacillus sake," *J. Food Science* 62(4): 870-2 (1997).
✓ 9	Zaleski et al., *Int. J. Biochem.* 11(3-4): 237-42 (Abstract only) (1980).
✓ 10	MacDonald et al., *Biochim. Biophys. Acta.* 663(1): 302-13 (Abstract only) (1981).
✓ 11	B.A. McCormick et al. "Inhibition of *Shigella flexneri*-induced transepithelial migration of polymorphonuclear leucocytes by cadaverine," *Cellular Microbiology*, 1(2): 143-155 (1999).
✓ 12	A.L. Dela Vega & A.H. Delcour, "Cadaverine induces closing of *E. coli* porins," *The EMBO Journal*, 14(23): 6058-65 (1995).

Examiner	Date Considered
*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	
Form PTO 1449	Patent and Trademark Office - U.S. Department of Commerce

OMB No. 0651-0011

INFORMATION DISCLOSURE CITATION

y. Docket No.	04995.0044-01	Appln. No.	10/034,213
plicant	A. MAURELLI et al.		
F ng Date	January 3, 2002	Group:	1645

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)	
13	R. Iyer & A.H. Delcour, "Complex Inhibition of OmpF and OmpC Bacterial Porins by Polyamines," *Journal of Biological Chemistry*, 272(30): 18595-18601 (1997).
14	R. Flachmann et al., "Molecular biology of pyridine nucleotide biosynthesis in *Escherichia coli*. Cloning and characterization of quinolinate synthesis genes nadA and nadB," *Eur J. Biochem*, 175(2): 221-8 (1998).
15	S.B. Formal et al., "Shigella Vaccines," *Reviews of Infectious Diseases*, Vol. 11, Supplement 3, pp. S547-S551 (1989).
16	S.B. Formal et al. "Protection of Monkeys Against Experimental Shigellosis with a Living Attenuated Oral Polyvalent Dysentery Vaccine," *Journal of Bacteriology*, 92(1): 17-22 (.1966).
17	S.B. Formal et al., "Attenuation of Strains of Dysentery Bacilli," *International Symposium on Enterobacterial Vaccines, Berne 1968, Symp. Series Immunobiol. Standard.*, 15: 73-78 (1971).
18	J. Hacker et al., "Pathogenicity islands of virulent bacteria: structure, function and impact on microbial evolution," *Molecular Microbiology*, 23(6): 1089-1097 (1997).
19	G.T. Keusch & M. Jacewicz, "Primary Amines and Chloroquine Inhibit Cytotoxic Responses to Shigella Toxin and Permit Late Antibody Rescue of Toxin Treated Cells," *Biochemical and Biophysical Research Communications*, 121(1): 69-76 (1984).
20	J.E. Leach & F.F. White, "Bacterial Avirulence Genes," *Annu. Rev. of Phytopathol.*, 34: 153-179 (1996).
21	N. Nakata et al. "The absence of a surface protease, OmpT, determines the intercellular spreading ability of *Shigella*; the relationship between the *ompT* and *kcpA* loci," *Molecular Microbiology*, 9(3): 459-468 (1993).
22	P.J. Sansonetti et al., "Alterations in the Pathogenicity of *Escherichia coli* K-12 After Transfer of Plasmid and Chromosomal Genes from *Shigella flexneri*," *Infection and Immunity*, 39(3): 1392-1402 (1983).
23	English abstract no. 07602005 for European Patent Office Patent No. 0 279 273 A2.
24	International Search Report dated October 6, 1999.
25	A.T. Maurelli et al., "'Black holes' and bacterial pathogencity: A large genomic deletion that enhances the virulence of *Shigella* spp. and enteroinvasive *Escherichia coli*," *Proc. Natl. Acad. Sci. USA*, 95:3943-3948 (1998).

Examiner	Date Considered
*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	
Form PTO 1449	Patent and Trademark Office - U.S. Department of Commerce